The following is a complete listing of the claims, and replaces all earlier version and listings.

1.   (currently amended): A printing system including an information processing apparatus which outputs print data and a printing apparatus which receives the print data from said information processing apparatus and prints a color image on a sheet, wherein said information processing apparatus comprises:

storage means for storing a plurality of tables for defining a set of dither matrix patterns used for character/line image and halftone image for each color component;

designation means for designating a table among the plurality of tables;

generation means for generating image data for respective printing color components of an image based on data to be print-outputted delivered from higher processing and quantizing the generated image data for respective printing color components using dither matrixes specified by the table designated by said designation means;

coding means for compress-encoding the quantized image data for the respective printing color components generated by said generation means;

notification means for predicting coded data amounts for the respective printing color components based on the table designated by said designation means and the sizes of halftone image areas and character/line image areas included in the ~~image to be printed~~ <u>respective printing color components</u>, generating memory allocation ratio information based on a ratio of the predicted coded data amounts for the respective printing

color components coded by said coding means and notifying said printing apparatus of the memory allocation ratio information <u>so that said printing apparatus allocates memory areas for respective color components</u>; and

output means for<u>, after said notification means notifies said printing apparatus of the memory allocation ratio information,</u> outputting the <u>coded</u> image data [[for]] <u>of</u> the respective printing color components coded by said coding means to said printing apparatus,

and wherein said printing apparatus comprises:

a reception buffer ~~to store, temporarily, the image data for the respective printing color components outputted by said output means~~;

<u>memory allocation means for receiving the memory allocation information notified by said notification means and allocating, in accordance with the received memory allocation ratio information, memory areas for respective color components in the reception buffer so that the memory sizes of each memory areas correspond to ratios of the predicted coded data amounts for the respective printing color components;</u>

<u>receiving means for, after said memory allocation means allocates memory areas, receiving coded image data for respective color components and storing the received coded image data of respective color components into respective allocated memory areas;</u>

plural decoding means, independently provided for the respective printing color components, for decoding coded data <u>stored in the memory areas</u> to image data; and

~~means for setting sizes of said reception buffer allocated for the respective printing color components, in accordance with the memory allocation ratio information~~

<u>printing means for printing the image data for respective color components</u> <u>decoded by said plural decoding means on a sheet.</u>

2. (original): The printing system according to claim 1, wherein respective areas of said reception buffer allocated for the respective printing color components are utilized as a ring buffer.

3. - 5. (canceled).

6. (currently amended): A printing system including an information processing apparatus which outputs print data and a printing apparatus which receives the print data from said information processing apparatus and prints a color image on a sheet, wherein said information processing apparatus comprises:

storage means for storing a plurality of tables for defining a set of dither matrix patterns used for character/line image and halftone image for each color component;

designation means for designating a table among the plurality of tables;

generation means for generating image data for respective printing color components of an image based on data to be print-outputted delivered from higher processing and quantizing the generated image data for respective printing color components using dither matrixes specified by the table designated by said designation means;

coding means for compress-encoding the quantized image data for the respective printing color components generated by said generation means;

notification means for calculating code data amounts for the respective printing color components by counting data amounts of the quantized halftone image areas and character/line image areas for the respective printing color components in accordance with the table designated by said designation means, generating memory allocation ratio information based on a ratio of the calculated coded data amounts for the respective printing color components and notifying said printing apparatus of the memory allocation ratio information so that said printing apparatus allocates memory area for respective color components; and

output means for, after said notification means notifies said printing apparatus of the memory allocation ratio information, outputting the coded image data [[for]] of the respective printing color components coded by said coding means to said printing apparatus,

and wherein said printing apparatus comprises:

a reception buffer ~~to store, temporarily, the image data for the respective printing color components outputted by said output means~~;

memory allocation means for receiving the memory allocation information notified by said notification means and allocating, in accordance with the received memory allocation ratio information, memory areas for respective color components in the reception buffer so that the memory sizes of each memory areas correspond to ratios of the predicted coded data amounts for the respective printing color components;

receiving means for, after said memory allocation means allocates memory areas, receiving coded image data for respective color components and storing the received coded image data of respective color components into respective allocated memory areas;

plural decoding means, independently provided for the respective printing color components, for decoding coded data <u>stored in the memory areas</u> to image data; and

~~means for setting sizes of said reception buffer allocated for the respective printing color components, in accordance with the memory allocation ratio information~~

<u>printing means for printing the image data for respective color components decoded by said plural decoding means on a sheet.</u>

7.   (previously presented): The printing system according to claim 6, wherein said information processing apparatus further comprises:

request means for requesting status information of said reception buffer to said printing apparatus;

determination means for determining whether or not next page compressed data for the respective printing color components can be stored in available areas of the reception buffer for the respective printing color components, based on the status information obtained by said request means; and

control means for, if said determination means determine that the next page compressed data can be stored, deleting the memory allocation ratio information to be notified by said notification means and causing said output means to output the next page of compressed data.

8.   (currently amended): An information processing apparatus, which is connectable to a printing apparatus in which sizes of reception buffer memory allocated for

respective color components are changed in accordance with external instruction information, and which outputs print data to said printing apparatus, comprising:

storage means for storing a plurality of tables for defining a set of dither matrix patterns used for character/line image and halftone image for each color component;

designation means for designating a table among the plurality of tables;

generation means for generating image data for respective printing color components of an image based on data to be print-outputted delivered from higher processing and quantizing the generated image data for respective printing color components using dither matrixes specified by the table designated by said designation means;

coding means for compress-encoding the quantized image data for the respective printing color components generated by said generation means;

notification means for predicting coded data amounts for the respective printing color components based on the table designated by said designation means and the sizes of halftone image areas and character/line image areas included in the ~~image to be printed~~ <u>respective printing color components</u>, generating memory allocation ratio information based on a ratio of the predicted coded data amounts for the respective printing color components coded by said coding means and notifying said printing apparatus of the memory allocation ratio information <u>so that said printing apparatus allocates memory areas for respective color components</u>; and

output means for<u>, after said notification means notifies said printing apparatus of the memory allocation ratio information,</u> outputting the <u>coded</u> image data

[[for]] _of_ the respective printing color components coded by said coding means to said printing apparatus.

9. - 11. (canceled).

12.   (currently amended): [[A]] <u>An</u> information processing apparatus, which is connectable to a printing apparatus in which sizes of reception buffer memory allocated for respective color components are changed in accordance with external instruction information, and which outputs print data to said printing apparatus, comprising:

storage means for storing a plurality of tables for defining a set of dither matrix patterns used for character/line image and halftone image for each color component;

designation means for designating a table among the plurality of tables;

generation means for generating image data for respective printing color components of an image based on data to be print-outputted delivered from higher processing and quantizing the generated image data for respective printing color components using dither matrixes specified by the table designated by said designation means;

coding means for compress-encoding the quantized image data for the respective printing color components generated by said generation means;

notification means for calculating code data amounts for the respective printing color components by counting data amounts of the quantized halftone image areas and character/line image areas for the respective printing color components in accordance

with the table designated by said designation means, generating memory allocation ratio information based on a ratio of the calculated coded data amounts for the respective printing color components and said printing apparatus of notifying the memory allocation ratio information so that said printing apparatus allocates memory area for respective color components; and

output means for, after said notification means notifies said printing apparatus of the memory allocation ratio information, outputting the coded image data for the respective printing color components coded by said coding means to said printing apparatus.

13. (previously presented): The information processing apparatus according to claim 12, further comprising:

request means for requesting status information of said reception buffer to said printing apparatus;

determination means for determining whether or not next page compressed data for the respective printing color components can be stored in available areas of the reception buffer for the respective printing color components, based on the status information obtained by said request means; and

control means for, if said determination means determine that the next page compressed data can be stored, deleting the memory allocation ratio information to be notified by said notification means and causing said output means to output the next page of compressed data.

14.   (currently amended): A control method for an information processing apparatus, which is connectable to a printing apparatus in which sizes of reception buffer memory allocated for respective color components are changed in accordance with external instruction information, and which outputs print data to the printing apparatus, said method comprising:

a storing step of storing a plurality of tables for defining a set of dither matrix patterns used for character/line image and halftone image for each color component;

a designation step of designating a table among the plurality of tables;

a generation step of generating image data for respective printing color components of an image based on data to be print-outputted delivered from higher processing and quantizing the generated image data for respective printing color components using dither matrixes specified by the table designated in said designation step;

a coding ~~means~~ step of compress-encoding the quantized image data for the respective printing color components generated in said generation step;

a notification step of predicting coded data amounts for the respective printing color components based on the table designated in said designation step and the sizes of halftone image areas and character/line image areas included in the image to be printed, generating memory allocation ratio information based on a ratio of the predicted coded data amounts for the respective printing color components coded in said coding step and notifying the printing apparatus of the memory allocation ratio information <u>so that said printing apparatus allocates memory area for respective color components</u>; and

an output step <u>for, after said notification step notifies said printing apparatus of the memory allocation ration information,</u> [[of]] outputting the <u>coded</u> image data for the respective printing color components coded in said coding step to the printing apparatus.

15.   (canceled).

16.   (previously presented): A computer-readable medium that stores a computer program for causing a computer to implement the method recited in claim 14.